

REMARKS

This paper is responsive to the Non-Final Office Action dated May 17, 2005.

Claims 1, 3-16, 18-21, 23-33, 35-62, 64-70, 72-74, 76-79, 81, 82, 84-88, 90-97 and 99-106 are pending. Claims 23-33, 35-62, 76-79, 81-82, 84-88, 90-97, 103, and 106 are withdrawn.

Claims 1, 3, 6-7, 21, 62, 67, 101-102, 104-105 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, et al. (U.S. Patent No. 6,414,673 B1, hereinafter Wood) in view of Azima, et al. (U.S. Patent No. 6,580,799 B1, hereinafter Azima) and Gill, et al. (U.S. Patent No. 5,831,934, hereinafter Gill).

Claims 99-100 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood in view of Azima.

Claims 8-9, 20, 66, 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood and Azima as applied to Claim 1, 62 in view of Knowles (U.S. Patent No. 5,329,070).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claim 3 in view of Weigers, et al. (U.S. Patent No. 5,856,820).

Claim 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claim 3, 35 in view of Zook, et al. (U.S. Patent No. 6,246,638 B1).

Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, et al., Azima, et al., and Gill, et al. as aforementioned in Claim 1 in view of Takahashi, et al. (U.S. Patent No. 5,638,093).

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claim 1 in view of Tager, et al. (U.S. Patent No. 6,160,757).

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, et al., Azima, et al., Gill, et al., and Tager, et al. as aforementioned in Claims 15, 47 in view of Hoffberg, et al. (U.S. Patent No. 6,400,996 B1).

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable Wood, Azima, and Gill, as aforementioned in Claim 1 in view of Flowers (U.S. Patent No. 6,160,757). Applicant notes that Flowers is patent number 5,877,458 and presumes that Flowers is the patent being applied by the Examiner.

Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claims 1, 101, 52 in view of Kent (U.S. Patent No. 5,986,224).

Claims 68 and 70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, et al., Azima, et al. and Gill, et al. as aforementioned in Claim 62, 75 in view of Hotta, et al. (U.S. Patent No. 4,389,711)

Claims 64-65 and 73-74 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claims 62-63, 75 in view of Koh, et al. (U.S. Patent No. 6,335,725 B1).

Claim 72 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claim 62 in view of Ketwich (U.S. Patent No. 6,072,475).

Claims 10-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood, Azima, and Gill, as aforementioned in Claims 1, 101, 52 in view of Hoffberg, et al. (U.S. Patent No. 6,400,996 B1).

Applicant respectfully traverses the rejections above for the following reasons.

Restriction Requirement

Applicant respectfully submits that claims 101 and 104 are generic as both elected and nonelected species depend from them. Acknowledgement that those claims are generic is respectfully requested.

Rejection of Claim 1

With regards to claim 1, the Office Action states that Wood teaches a method of determining information relating to a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system that is an active system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract.

The Office Action further states that Wood teaches providing a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a transmitter pen and a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting bending wave vibration.

Claim 1 further recites contacting the member at a discrete location to generate bending wave vibration in the member. The Office Action states that Wood teaches contacting the member at a discrete location to generate wave vibration in the member pointing to Fig. 1, items 30, X1, Y1, and col. 5, lines 11-16. However, Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 transmits a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location of the tip of the pen with respect to the writing surface. There is no teaching in Wood of contacting the member at a discrete location to generate bending wave vibration in the member. Nor has the Office Action identified what in Wood corresponds to the claimed member. Instead, Wood teaches that the pen 30 transmits an ultrasonic signal received by the receivers 20a and 20b.

Claim 1 further recites measuring the bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine the measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above Wood doesn't measure wave vibration in the member but instead measures time dependent output signals

transmitted from moveable output transducer 28 to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

The Office Action states that Wood does not show bending wave vibration. Applicant points out that Wood also does not teach using vibration in a member (e.g., a touch panel) and sensors coupled to the touch panel to determine location of a contact.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Azima. Azima describes a keyboard with enhanced acoustic functionality. The keyboard includes a bending wave loudspeaker. See Summary. Fig. 1 shows a loudspeaker 46 in the keyboard 40. The loudspeaker may be formed by the touchpad itself as shown in Fig. 3. However, Azima in no way suggests the use of bending waves in the keyboard to detect information relating to a contact on the member that generates bending waves in the member. The bending waves in Azima are instead generated by exciters 48 and 64 (Figs. 1, 2 and 3).

Thus, Azima adds nothing to the deficiencies of Wood pointed out above.

Claim 1 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Wood and Azima do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Gill describes a method for analyzing received wave signal data in an acoustic logging system. The purpose of Gill is to determine the phase velocity in the surrounding geophysical formation. The acoustic transmitters in Gill generate acoustic waves that include compression waves, shear waves, and undesirable tube waves. Col. 6, lines 32-34. The measured signal is filtered into a frequency band, such that the filtered signals result in a wavepacket using a Heisenberg filter. A Hilbert transform is used to generate both real and imaginary components of the wavepackets, which is useful for calculation of phase as a function of time. The method then calculates phase at multiple points for the wave packet. That information is used to estimate the time delay between different measurements of phase rather than one threshold measurement

of time or arrival. The time of arrival estimation is then used to determine phase velocity, from which useful information is obtained about the surrounding geophysical medium.

Gill teaches that “the multiplicity of phase arrival data may be corrected for dispersion effects in the formation, for example by fitting the data to a mathematical model of dispersion, thereby providing improved measurements of true acoustic phase velocity.” Col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Azima. Wood has no need to correct for dispersion effects taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Azima never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 1 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Azima. Further, because there is no need for dispersion correction in Wood and Azima, the Office Action fails to show how combining Gill with Wood and Azima achieves the invention recited in claim 1.

Accordingly, in view of the above deficiencies of Wood, Azima and Gill applicant submits that claim 1 and all claims dependent thereon distinguish over Wood, Azima, and Gill.

Rejection of Claim 62

With regards to claim 62, the Office Action states that Wood teaches a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system that is an active system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach a passive contact sensitive device.

The Office Action further states that Wood teaches a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a location detection system for a transmitter pen for use with a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting wave vibration, much less bending wave vibration as claimed.

The Office Action further states that Wood teaches at least one sensor coupled to the member for measuring wave vibration in the member, point to Fig. 1, items 20a and 20b, 18, 30, and col. 5, lines 9-27. Applicant respectfully disagrees. The receivers 20a and 20b detect transmissions, which are taught to be ultrasound output signals from the signal transmitter pen 30a. See col. 5, lines 53-55. Thus, Wood fails to teach a sensor for measuring bending wave vibration in member as recited in claim 62.

Claim 62 further recites a processor operatively coupled to the at least one sensor for processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member created by the contact and measured by the at least one sensor and for applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

The Office Action states that Wood teaches processing the measured wave signal to calculate information relating to the contact. However, the claim requires processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member created by the contact. Wood does not process information relating to a contact but information related to location of the emitting pen. Nor does Wood teach anything about bending waves.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Azima. Azima describes a keyboard with enhanced acoustic functionality. The keyboard includes a bending wave loudspeaker. See Summary. Fig. 1 shows a loudspeaker 46 in the keyboard 40. The loudspeaker may be formed by the touchpad itself as shown in Fig. 3. However, Azima in no way suggests the use of bending waves in the keyboard to detect information relating to a contact on the member that generates bending waves in the member. The bending waves in Azima are instead generated by exciters 48 and 64 (Figs. 1, 2 and 3).

Thus, Azima adds nothing to the deficiencies of Wood pointed out above.

The Office Action mentions Knowles in relation to claim 62 but fails to provide any information on how Knowles is properly combined with Azima. Applicant presumes that the

reference to Knowles was intended to be to Wood. If that is not the case, applicant respectfully requests the Examiner to clarify the use Knowles in the rejection of claim 62.

Claim 62 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Knowles (assumed to be Wood) and Azima do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Gill describes a method for analyzing received wave signal data in an acoustic logging system. The purpose of Gill is to determine the phase velocity in the surrounding geophysical formation. The acoustic transmitters in Gill generate acoustic waves that include compression waves, shear waves, and undesirable tube waves. Col. 6, lines 32-34. The measured signal is filtered into a frequency band, such that the filtered signals result in a wavepacket using a Heisenberg filter. A Hilbert transform is used to generate both real and imaginary components of the wavepackets, which is useful for calculation of phase as a function of time. The method then calculates phase at multiple points for the wave packet. That information is used to estimate the time delay between different measurements of phase rather than one threshold measurement of time or arrival. The time of arrival estimation is then used to determine phase velocity, from which useful information is obtained about the surrounding geophysical medium.

Gill teaches that “the multiplicity of phase arrival data may be corrected for dispersion effects in the formation, for example by fitting the data to a mathematical model of dispersion, thereby providing improved measurements of true acoustic phase velocity.” Col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Azima. Wood has no need to correct for dispersion effects as taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Azima never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 62 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Azima. Further, because there is no need for dispersion correction in Wood and Azima, the Office Action fails to show how combining Gill with Wood and Azima achieves the invention recited in claim 62.

Further, Gill teaches determining time of flight over a narrow frequency band in order to obtain phase velocity of a structure, not information related to the contact in the member that generated the bending wave vibration that is measured.

In view of the above shortcomings in Wood, that are not made up for in either Azima and Gill, applicant submits that claim 62 and all claims dependent thereon distinguish over Wood, Azima, and Gill, alone or in combination.

Rejection of Claim 101

With regards to claim 101, the Office Action states that Wood teaches a method of determining information relating to a contact on a contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach determining information relating to a contact, only to location of the pen.

Claim 101 further recites contacting a member capable of supporting bending waves to produce a change in bending wave vibration in the member. The Office Action states that Wood teaches contacting the member capable of supporting waves to produce a change in wave vibration of the member pointing to Fig. 1, items 30, X1, Y1, col. 5, lines 11-16. However, Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 transmits a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location of the tip of the pen with respect to the writing surface. There is no teaching in Wood of contacting a member capable of supporting bending waves to produce a change in bending wave vibration in the member. Instead, Wood teaches that the pen 30 transmits an ultrasonic signal received by the receivers 20a and 20b so the location of the pen can be determined.

Claim 101 further recites measuring the changed bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine a measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above Wood doesn't measure wave vibration in the member but instead transmits time dependent output signals from moveable output transducer 28 in the pen to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

Although the Office Action states the Wood teaches processing the measured wave signal, since Wood does not measure the claimed wave vibration in the member, Wood cannot teach this limitation either.

The Office Action states that Wood does not show bending wave vibration. Applicant points out that Wood also does not teach using vibration in a member (e.g., a touch panel) and sensors coupled to the touch panel to determine location of a contact.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Azima. Azima describes a keyboard with enhanced acoustic functionality. The keyboard includes a bending wave loudspeaker. See Summary. Fig. 1 shows a loudspeaker 46 in the keyboard 40. The loudspeaker may be formed by the touchpad itself as shown in Fig. 3. However, Azima in no way suggests the use of bending waves in the keyboard to detect information relating to a contact on the member that generates bending waves in the member. The bending waves in Azima are instead generated by exciters 48 and 64 (Figs. 1, 2 and 3).

Thus, Azima adds nothing to the deficiencies of Wood pointed out above.

Claim 101 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Wood and Azima do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Azima. Wood has no need to correct for dispersion effects taught by Gill because Wood is transmitting

ultrasonic waves from the pen to sensors through the air. Azima never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 1 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Azima. Further, because there is no need for dispersion correction in Wood and Azima, the Office Action fails to show how combining Gill with Wood and Azima achieves the invention recited in claim 1. Further, Gill teaches determining time of flight over a narrow frequency band in order to obtain phase velocity of a structure, not information related to the contact in the member that generated the bending wave vibration that is measured.

Rejection of Claim 104

With regards to claim 104, the Office Action states that Wood teaches a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach a contact sensitive device. Applicant notes that claim 104 does not require a passive device.

The Office Action further states that Wood teaches a member capable of supporting wave vibration relying on Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a location detection system for a transmitter pen for use with a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting wave vibration, much less bending wave vibration as claimed.

The Office Action further states that Wood teaches at least one sensor coupled to the member for measuring wave vibration in the member, relying on Fig. 1, items 20a and 20b, 18, 30, and col. 5, lines 9-27. Applicant respectfully disagrees that Wood teaches a sensor for measuring wave vibration in the member. In Wood, the receivers 20a and 20b detect transmissions, which are ultrasound output signals from the signal transmitter pen 30a. See col. 5, lines 53-55. Thus, Wood fails to teach a sensor for measuring bending wave vibration in member as recited in claim 104.

Claim 104 further recites a processor operatively coupled to the at least one sensor for processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member caused by the contact and measured by the at least one sensor and for applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

The Office Action states that Wood teaches processing the measured wave signal to calculate information relating to the contact. However, the claim requires processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member caused by the contact. Wood does not process information relating to a contact but information related to location of the emitting pen. Nor does Wood teach anything about bending waves as claimed.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Azima. Azima describes a keyboard with enhanced acoustic functionality. The keyboard includes a bending wave loudspeaker. See Summary. Fig. 1 shows a loudspeaker 46 in the keyboard 40. The loudspeaker may be formed by the touchpad itself as shown in Fig. 3. However, Azima in no way suggests the use of bending waves in the keyboard to detect information relating to a contact on the member that generates bending waves in the member. The bending waves in Azima are instead generated by exciters 48 and 64 (Figs. 1, 2 and 3).

Thus, Azima adds nothing to the deficiencies of Wood pointed out above.

The Office Action mentions Knowles in relation to claim 104 but fails to provide any information on how Knowles is properly combined with Azima (or Wood). Applicant presumes that the reference to Knowles was intended to be to Wood. If that is not the case, applicant respectfully requests the Examiner to clarify the use Knowles in the rejection of claim 104.

Claim 104 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Knowles (assumed to be Wood) and Azima do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Azima. Wood has no need to correct for dispersion effects in a geologic formation as taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Azima never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 104 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Azima. Further, because there is no need for dispersion correction in Wood and Azima, the Office Action fails to show how combining Gill with Wood and Azima achieves the invention recited in claim 104.

In view of the above shortcomings in Wood, that are not made up for in either Azima and Gill, applicant submits that claim 104 and all claims dependent thereon distinguish over Wood, Azima, and Gill, alone or in combination.

Rejection of Claim 99

Claim 99 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood in view of Azima. With regards to claim 99, the Office Action states that Wood teaches a method of determining information relating to a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system that is an active system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, the Wood system is active, not passive.

The Office Action further states that Wood teaches providing a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a transmitter pen and a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting bending wave vibration. Instead, Wood teaches a whiteboard or other writing surface.

Claim 99 further recites contacting the member to generate bending wave vibration in the member. The Office Action states that Wood teaches contacting the member to generate wave vibration in the member pointing to Fig. 1, items 30, X1, Y1, col. 5, lines 11-16. However, Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 transmits a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location with respect to the writing surface of the tip of the pen. There is no teaching in Wood of contacting the member to generate bending wave vibration in the member. Instead, Wood teaches that the pen 30 transmits an ultrasonic signal received by the receivers 20a and 20b.

Claim 99 further recites measuring the bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine the measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above Wood doesn't measure wave vibration of any sort in the member but instead transmits time dependent output signals from moveable output transducer 28 to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

The Office Action states that Wood does not show bending wave vibration. Applicant points out that Wood also does not teach using vibration in a member (e.g., a touch panel) and sensors coupled to the touch panel to determine location of a contact.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Azima. Azima describes a keyboard with enhanced acoustic functionality. The keyboard includes a bending wave loudspeaker. See Summary. Fig. 1 shows a loudspeaker 46 in the keyboard 40. The loudspeaker may be formed by the touchpad itself as shown in Fig. 3. However, Azima in no way suggests the use of bending waves in the keyboard to detect information relating to a contact on the member that generates bending waves in the member. The bending waves in Azima are instead generated by exciters 48 and 64 (Figs. 1, 2 and 3).

Thus, Azima adds nothing to the deficiencies of Wood pointed out above. For at least the reasons pointed out above, applicant submits that claim 99 and all claims dependent thereon distinguish over Wood and Azima.

Summary

All of the independent claims have been shown to distinguish over the references as applied, including generic claims 101 and 104. Thus, applicant respectfully submits that all claims, including the currently withdrawn claims are in condition for allowance. In addition, the applicant submits that the other references applied in the Office Action fail to make up for the deficiencies of Wood, Azima, and Gill pointed out above. Accordingly, all claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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